

Title (en)

PIXEL STRUCTURE AND AN ASSOCIATED METHOD OF FABRICATING THE SAME

Title (de)

PIXELSTRUKTUR UND DIESBEZÜGLICHES VERFAHREN ZUIHRER HERSTELLUNG

Title (fr)

STRUCTURE DE PIXEL ET PROCEDE DE FABRICATION ASSOCIE

Publication

EP 1584084 A4 20091216 (EN)

Application

EP 04702221 A 20040114

Priority

- US 2004001067 W 20040114
- US 34621303 A 20030117

Abstract (en)

[origin: US2004140428A1] A pixel structure, which forms one element of a focal plane array, includes a bolometer having a detector and an insulator. The detector that is made from a material that absorbs incident thermal radiation and has an electrical resistance that varies in response to changes in the temperature of the material. The insulator has a plurality of serpentine legs disposed completely underneath the detector so that the insulator extends between the detector and the substrate. And the insulator supports the detector in a spaced-apart relationship with respect to the substrate to thermally isolate the detector from the substrate. To further improve the performance of the bolometer, the bolometer includes a resonant layer between the detector and the insulator. The resonant layer is disposed such that areas defined between the detector and the resonant layer, and between the resonant layer and the insulator, form first and second resonant cavities, respectively.

IPC 1-7

G09G 1/00

IPC 8 full level

G01J 5/00 (2006.01); **G01J 5/20** (2006.01); **G09G 1/00** (2006.01); **H01L 27/146** (2006.01); **H01L 31/02** (2006.01)

IPC 8 main group level

G09G (2006.01)

CPC (source: EP US)

G01J 5/20 (2013.01 - EP US); **H01L 27/14669** (2013.01 - EP US)

Citation (search report)

- [X] US 2002179837 A1 20021205 - RAY MICHAEL [US]
- See references of WO 2004068454A2

Citation (examination)

US 6495829 B1 20021217 - ODA NAOKI [JP]

Designated contracting state (EPC)

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DOCDB simple family (application)

US 34621303 A 20030117; EP 04702221 A 20040114; JP 2005518808 A 20040114; US 2004001067 W 20040114